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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,575	10/09/2003	Haochuan Jiang	GEMS 0216 PA	2574
27256	7590	06/22/2006	EXAMINER	
ARTZ & ARTZ, P.C. 28333 TELEGRAPH RD. SUITE 250 SOUTHFIELD, MI 48034			HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/605,575

Applicant(s)

JIANG, HAOCHUAN

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2006 and 01 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/1/06 has been entered.

Claims 17-22 remain withdrawn.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

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Examiner could find no support for the newly claimed "sintering a high-z powder and a glass powder mixture to form a first collimator tube".

First it is noted that there is no mention of any "mixture" or "high-z powder" in the specification. Second, the only mention of any glass powder is at [0018] which refers to "the glass powder" but there is no prior mention of this powder: but there is no indication that it is used to form a collimator tube. Moreover, the only prior mention of glass is "high-z glass" (also of [0018]), thus it is deemed that the tungsten powder embodiment is directed to adding tungsten to *the (high-z) glass*.

Third, as per at least claim 4: the tube is glass, but as evidenced by MacCragh 3713816, when silica and tungsten powders are sintered together, the result is a cerment. Thus, MacCragh suggests that to one of ordinary skill reading the present disclosure would interpret that the "powder" embodiment does not result in a glass tube. Thus, the disclosure fails to reasonably convey that at the time of filing that applicants had possession of forming a glass tube by mixing the two powders.

Fourth, as per MPEP 2163 II) A) 2) a) ii)

>The disclosure of only one species encompassed within a genus adequately describes a claim directed to that genus only if the disclosure "indicates that the patentee has invented species sufficient to constitute the gen[us]." See Enzo Biochem, 323 F.3d at 966, 63 USPQ2d at 1615

Thus for the "high-z powder" genus, applicant's disclosure of only one specie (tungsten powder) does not indicate that patentee had invented species sufficient to constitute the genus. [0018] refers to different embodiments. The last embodiment is directed to sintering tungsten metal powder – there is no other mention or even

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suggestion of other metals, or other powders. Thus there is no indication that applicant had invented other species which would be sufficient to constitute the genus.

Also, there is no support for the dependent claims which call for a glass tube: because there is no disclosure of any glass tube that is made by two powders. The only disclosure of two powders is for the tungsten embodiment – there is nothing which suggests that such results in a glass. As per MacCragh – the result is a cermet not a glass. Thus it is presumed that one of ordinary skill would NOT interpret that the sintering of tungsten with glass would result in glass.

Claim 9: Examiner could not find anything remotely suggestive of the new(er) limitations added to claim 9.

Claims 4 and 6: as per [0018], there are various embodiments. Claim 1 is directed to a/the powder embodiments. But claims 4 and 6 are directed to other embodiments. There is no basis for combining the embodiments, especially when the powder is described as being “another” embodiment.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1- 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1) The independent claims require sintering a "high-z powder and a glass powder mixture". Examiner cannot tell if it requires a "glass powder mixture" that is combined with the tungsten, or if it requires a mixture comprising the two powders (glass and high-z). There is no mention of any mixture in the specification so one cannot turn to the specification to tell what is meant.

The term "high-z" is indefinite as to its meaning. Examiner sees no indication, guideline or definition in the specification as to what constitutes a "high" level of z. Likewise, such does not appear to be an art recognized term. It is a "word of degree" which is imprecise unless a definition or guideline has been set forth in the specification or the term is otherwise well known in the art. See Seattle Box Co. v. Industrial Crating and Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

Accordingly, it is determined that one of ordinary skill in this art would not have been apprised of the scope of claims and therefore, determined that claims 1-16 are indefinite and fail to meet the requirement of 35 U.S.C. 5 112, second paragraph.

***Response to Arguments***

Applicant's arguments filed 23 February 2006 have been fully considered but they are not persuasive.

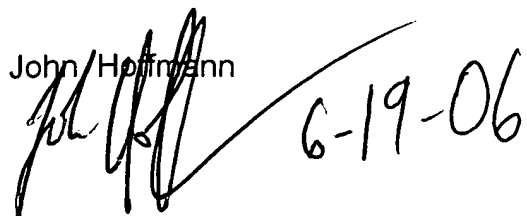
See the discussion in the Advisory Action of 3/6/2006 as to why the arguments are not persuasive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann



6-19-06

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Primary Examiner  
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jmh